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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,651	03/01/2002	Brent Townshend	01-185-A	7884

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EXAMINER

OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/087,651	Applicant(s) TOWNSHEND ET AL.	
	Examiner Michael N. Opsasnick	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-24,26,28,29,32-38 and 40-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24,26,28-30,32-38,40-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/2005 has been entered.

Claim Rejections - 35 USC § 103

2. Claims 1,2,4,5,6,7, 8, 11-18, 24, 26, 28,29, 32, 33, 36,37,42,44 and 45, are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rtischev et al in view of Kahn et al (6122614) In further view of Baker et al (4783803).

As per claims 1, 2, 5, 7, 36,37 and 45, Rtischev et al.teach:

- a means for hearing at least one person who is repeating items (spoken-language instruction apparatus employing speech recognition with user reading words from a written script from an inherent database, Abstract; user and microphone, or user and telephone, Fig. 1, elements 12 and 16, or elements 12 and 14, respectively); and

Art Unit: 2655

- means for preparing a transcription of what was heard by the means for hearing (as input speech being transcribed – col. 5 lines 5-27)
- means for comparing the items with a transcription of what was heard and thus measuring intelligibility from the comparison (speech recognizer using nonlinear HMM speech models, Fig. 3, element 112; preselected script, element 114; score set, element 120; reading errors, col. 3, lines 43 and 47).
- A measurement unit operable to determine an intelligibility score of the speaker by comparing the items and a transcription of what the listener hears when the speaker repeats the items (as FSM comparing the resubmitted sentence after determining the previous result wasn't satisfactory (col. 6 lines 54-67)

Rtischev *et al.* also teaches evaluations using data selected from at least speaker responses and items (col. 3, lines 11-17).

As per claim 8, the “reading errors” (col. 3, lines 43 and 47) of Rtischev *et al.* inherently include at least word substitutions, for an error in reading a word could cause the ASR to interpret it as a different existing word (e.g. a Japanese reader using Rtischev *et al.*'s apparatus to learn English might pronounce “frame” as “flame”, which would cause the ASR to recognize the spoken word as the latter).

Art Unit: 2655

As per claims 1, 2, 5, 7, 36,37 and 45, Rtischev *et al* does not explicitly teach a human listener preparing the transcription without prior knowledge of the text that is being spoken, however, Kahn *et al* (6122614) teaches a human operator transcribing an audio file (col. 8 lines 19-28) and performing a secondary comparison between the audio file and the initial transcription (col. 8 lines 29-35; fig. 2c). Therefore, it would have been obvious to one of ordinary skill in the art of speech transcription to modify the teachings of Rtischev *et al* with operator based transcription and double-checking because it would advantageously allow for human interpretation of the audio file without tying time resources of the user themselves (Kahn *et al*, col. 1 lines 17-26).

The combination of Rtischev *et al* in view of Kahn now teaches a system wherein the user's input is transcribed (Rtischev *et al*, as input speech being transcribed – col. 5 lines 5-27), the user's input being compared to a transcription (Rtischev, as FSM comparing the resubmitted sentence after determining the previous result wasn't satisfactory (col. 6 lines 54-67); wherein the one transcription come from a human operator placed between the user and the system (Kahn *et al* (6122614) teaches a human operator transcribing an audio file (col. 8 lines 19-28; the operator manually inputs the words that the operator "perceives to hear")).

The combination of Rtischev *et al* in view of Kahn does not explicitly teach the automatic recognition of the operator's interpretation of what is heard (that is, the claim elements require the operator to speak what is heard; whereas the combination of Rtischev *et al* in view of Kahn requires the operator to type what is heard). Baker *et al* (4783803), however, teaches a microphonic input for a user to input speech for recognition (Baker *et al* (4783803), col. 6 lines

Art Unit: 2655

20-26), wherein the output is in word text format and is allowed to be edited by the user (Baker et al (4783803), col. 45 line 54 – col. 46 line 4). Therefore, it would have been obvious to one of ordinary skill in the art of speech recognition at the time the invention was made to modify the system combination of Rtischev et al in view of Kahn with automated speech recognition of the operator's interpretation of the user's input because it would advantageously speed up the recording process of the operator's perceived translation (as opposed to typing the translation manually), (Baker et al (4783803), col. 1 lines 13-20).

As per claims 4,6, 8, 11-13, 15-18, 24, 26, 28,29, 32, 33, 42, and 44, the combination of Rtischev et al in view of Kahn et al (6122614) in further view of Baker et al (4783803) teaches listening to the speaker (Kahn et al (6122614), via the recorded audio file of the user – col. 8 lines 19-28).

As per claim 14, Rtischev et al in view of Kahn et al (6122614) in further view of Baker et al (4783803) does not explicitly teach selecting listeners based on certain background characteristics. However, it would have been obvious for an artisan at the time of invention to select listeners that have extensive background speaking knowledge of the language being learned because they would be best able to determine the intelligibility of someone trying to speak the language.

2. Claims 9, 10, 19, 20-23, 34, 35, 38,40-41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rtischev et al in view of Kahn et al (6122614) in

Art Unit: 2655

further view of Baker et al (4783803), as applied to claims 1, 2, 5, 7, 8, 36, and 37, above, in view of Charles Lewis *et al* (U.S. Patent 5,059,127, issued October 22, 1991).

As per claims 9, 10, 19, 20-23, 25, 34, 35, 41, and 43, while Rtischev et al in view of Kahn et al (6122614) in further view of Baker et al (4783803) teaches evaluating an error count intelligibility score (Rtischev et al, reading errors, col. 3, lines 43 and 47), they do not evaluate difficulty of the items and ability of a listener, nor doing this using Item Response Theory. However, Lewis *et al.* do (col. 1, line 63 through col. 2, lines 1, 16-26, and 42-43, with Figure 1A).

It would have been obvious for an artisan at the time of invention to do this because Lewis *et al.* teach that IRT “allows creation of a test in which different individuals receive different questions, yet can be scored on a common scale” as well as “permits determination in advance of test administration of the level of ability and the accuracy with which ability has been measured” (col. 2, lines 31-36).

The rest of the limitations were discussed in connection with the rejection of claims 1, 2, 5, 7, 8, 36, and 37, above.

As per claim 38, Rtischev et al in view of Kahn et al (6122614) in further view of Baker et al (4783803) does not teach a database containing data from previous evaluations. However, Lewis *et al.* teach retaining data from previous “testlets” and “sequentially administering testlets ... until a pass/fail decision can be made” (Abstract), thus suggesting retaining results of previous intelligibility evaluations (testlets) for later continued evaluation. It would have been obvious for

Art Unit: 2655

an artisan at the time of invention to do this, to avoid having to administer all the testlets in a single sitting.

As per claim 40, Rtischev *et al.* suggest use of nonlinear artificial neural net models for speech recognition (see reference to Kim *et al.* under "Other Publications" on the front page, top of second column).

Response to Arguments

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Examiner notes that the issue of the operator speaking the perceived translation has been addressed by the introduction of the Baker *et al* reference, in combination with Rtischev in view of Kahn. The comparison of transcribed text and the original user's text is taught by the Khan *et al* reference (when the operator compares the transcribed text with the user's text to generate a "verbatim file").

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Art Unit: 2655

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The facsimile phone number for this group is (571)272-7629.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571)272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
6/6/05


Michael N. Opsasnick
Examiner
Art Unit 2655